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REMARKS

The Office Action of June 22, 2006 was received and reviewed. The Examiner is thanked for reviewing the application.

Filed concurrently herewith is a *Request for a Two-Month Extension of Time* which extends the shortened statutory period of response to November 22, 2006. Accordingly, Applicants respectfully submit that this response is being timely filed.

Claims 1, 77-84, 87-90, and 93-107 were pending prior to the instant amendment for consideration. By this amendment, claims 1, 77-84, 97-103, 105, and 106 have been amended, and new claims 108-153 have been added to further complete the scope to which Applicants are entitled. Claims 104 and 107 have been canceled without prejudice or disclaimer. Accordingly, claims 1, 77-84, 87-90, 93-103, 105, 106, and 108-153 are pending for consideration, of which claims 1, 77-80, and 122-125 are independent.

Referring now to the detailed Office Action, claims 80, 81-83, and 107 stand objected to by the Examiner asserting insufficient antecedent basis. In response, Applicants have amended and/or canceled claims 80, 81-83, and 107, as shown above, to overcome this objection.

Claims 1, 102, and 103 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki et al. (JP 11-154714 and the Derwent Translation of this document – hereafter Yamazaki), Akbar (U.S. Patent No. 5,656,845 – hereafter Akbar), Miyawaki (U.S. Patent No. 5,808,336 – hereafter Miyawaki), and Tsutsumi (U.S. Patent No. 5,844,274 – hereafter Tsutsumi). Further, claims 77-84, 87-90, 93-96, and 104-107 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki, Akbar, Miyawaki, and Tsutsumi, as applied to Claim 1 above, and further in view of Koyama (U.S. Patent No. 5,793,344 – hereafter Koyama). Still further, claims 97-101 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamazaki, Akbar, Miyawaki, Tsutsumi, and Koyama, as applied to Claims 1 and 77-80 above, and further in view of Fukaya et al. (U.S. Patent No. 5,627,088 – hereafter Fukaya).

With respect to the independent Claim 1, the Examiner asserts that all of the features are disclosed in any one of Yamazaki, Akbar, Miyawaki, and Tsutsumi. Applicants have amended claim 1 to recite, *inter alia*, the feature "wherein the first film and the second film comprises an inert element." (See Applicants' specification at page 27, lines 10-20).

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Yamazaki, Akbar, Miyawaki, and Tsutsumi fail to teach or suggest this feature as presently claimed.

Furthermore, the Examiner asserts that it is obvious for a person of ordinary skill in the art to form a control gate electrode of the memory transistor of Yamazaki with the layer (comprising TaN and W) of the transistor of Tsutsumi. Applicants note that the transistor of Tsutsumi is not a memory transistor. With respect to the Examiner's assertion, Applicants believe that Tsutsumi fails to teach or suggest applying the layer (comprising TaN and W) to the control gate electrode of the memory transistor as presently claimed. Applicants believe that the layer comprising TaN and W brings a surprising effect only when the layer is used in the control gate electrode of the memory thin film transistor as presently claimed. It is well known that the work function of the TaN is about 4.76 eV and that of the W is about 4.55 eV. Applicants believe that this high work function prevents the undesirable influx of the electrons from the control gate electrode into the floating gate electrode, when the memory transistor executes the erase operation. Hence, Applicants believe that it is not obvious to combine the layer of Tsutsumi with the memory transistor of Yamazaki.

In addition, Applicants note that the Examiner asserts that Miyawaki teaches a feature "*an area of the first region is larger than an area of the second region*", however, the feature had been deleted in the Amendment filed in April 6, 2006. The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. MPEP §2142. To establish a prima facie case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, to modify the references or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art must teach all the claim limitations. MPEP §2142.

Applicants respectfully point to the final prong of the test, which states the prior art must teach all the claim limitations. At the very least, Yamazaki does not teach all of the claim limitations of independent claim 1 for the reasons set forth above.

Akbar, Miyawaki, and Tsutsumi do not cure the deficiencies of Yamazaki mentioned above. Therefore, Applicants respectfully submit that independent claim 1 is allowable as discussed previously. Further, any claim that depends from an allowable claim is allowable as well. Thus, Applicants respectfully request that the rejection of dependent claims 102 and 103 likewise be removed.

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In light of the foregoing arguments, withdrawal of the rejection of claims 1, 102, and 103 under 35 U.S.C. §103(a) as being as being unpatentable over Yamazaki, Akbar, Miyawaki, and Tsutsumi is respectfully requested.

With respect to independent claims 77-80, Applicants have amended the independent claims 77-80 to recite, *inter alia*, the feature "wherein the first film and the second film comprises an inert element." Yamazaki, Akbar, Miyawaki, and Tsutsumi fail to teach or suggest this feature as presently claimed. In addition, Applicants have further amended independent claims 79 and 80 to recite, *inter alia*, the features of "an X-address decoder; a Y-address decoder; n first signal lines ...; m second signal lines ...; m third signal lines ...; and n x m memory thin film transistors." (See Applicants' specification at page 10, line 20 to page 12 line 2 and FIG. 1). Again, Yamazaki, Akbar, Miyawaki, and Tsutsumi fail to teach or suggest these features as presently claimed.

Koyama does not cure the deficiencies of Yamazaki, Akbar, Miyawaki, and Tsutsumi mentioned above. Therefore, Applicants respectfully submit that independent claims 1 and 77-80 are allowable as discussed previously. Further, any claim that depends from an allowable claim is allowable as well. Thus, Applicants respectfully request that the rejection of remaining dependent claims 81-84, 87-90, 93-96, 105, and 106 likewise be removed.

In light of the foregoing arguments, withdrawal of the rejection of claims 77-84, 87-90, 93-96, and 104-107 under 35 U.S.C. §103(a) as being as being unpatentable over Yamazaki, Akbar, Miyawaki, Tsutsumi, as applied in claim 1 above, and further in view of Koyama is respectfully requested.

With respect to independent claims 1 and 77-80, Applicants have amended the independent claims 1 and 77-80 to recite, *inter alia*, the feature "wherein the first film and the second film comprises an inert element." Yamazaki, Akbar, Miyawaki, and Tsutsumi fail to teach or suggest this feature as presently claimed. In addition, Applicants have further amended independent claims 79 and 80 to recite, *inter alia*, the features of "an X-address decoder; a Y-address decoder; n first signal lines ...; m second signal lines ...; m third signal lines ...; and n x m memory thin film transistors." (See Applicants' specification at page 10, line 20 to page 12 line 2 and FIG. 1). Again, Yamazaki, Akbar, Miyawaki, and Tsutsumi fail to teach or suggest these features as presently claimed.

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Fukaya does not cure the deficiencies of Yamazaki, Akbar, Miyawaki, and Tsutsumi mentioned above. Therefore, Applicants respectfully submit that independent claims 1 and 77-80 are allowable as discussed previously. Further, any claim that depends from an allowable claim is allowable as well. Thus, Applicants respectfully request that the rejection of dependent claims 97-101 likewise be removed.

In light of the foregoing arguments, withdrawal of the rejection of claims 97-101 under 35 U.S.C. §103(a) as being as being unpatentable over Yamazaki, Akbar, Miyawaki, Tsutsumi, as applied in claims 1 and 77-80 above, and further in view of Fukaya is respectfully requested.

Claims 1, 77-84, 87-90, 93-96 and 103-107 are rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6,472,684 to Yamazaki et al. (hereafter Yamazaki '684) in view of Yamazaki, Akbar, Miyawaki, Tsutsumi and Koyama. The Examiner asserts that Yamazaki '684 claim most aspects of the instant, and it is obvious for one of ordinary skill in the art to combine the Yamazaki '684 with any one of Yamazaki, Akbar, Miyawaki, Tsutsumi and Koyama. However, Applicants believe that the added features, as discussed above, of the amended independent claims 1 and 77-80 are not claimed in Yamazaki '684 or taught or suggested in any one of Yamazaki '684, Yamazaki, Akbar, Miyawaki, Tsutsumi and Koyama.

In light of the foregoing arguments, withdrawal of the rejection of claims 1, 77-84, 87-90, 93-96 and 103-107 are rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-12 of Yamazaki '684 in view of Yamazaki, Akbar, Miyawaki, Tsutsumi and Koyama is respectfully requested.

Claims 1, 77-84, 87-90, 93-96 and 103-107 are rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over Claims 1 to 30 of U.S. Patent No. 6,509,602 to Yamazaki et al. (hereafter Yamazaki '602) in view of Yamazaki, Akbar, Miyawaki, Tsutsumi, and Koyama. In regard to this rejection, Applicants wish to respond in the same way as shown in the above paragraph.

In light of the foregoing arguments, withdrawal of the rejection of claims 1, 77-84, 87-90, 93-96 and 103-107 are rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-30 of Yamazaki '602 in view of

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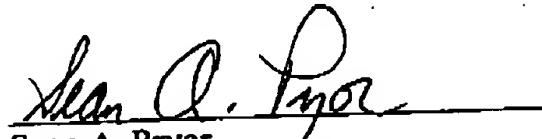
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Yamazaki, Akbar, Miyawaki, Tsutsumi and Koyama is respectfully requested.

In view of the foregoing, it is respectfully requested that the rejections of record be reconsidered and withdrawn by the Examiner, that claims 1, 77-84, 87-90 and 93-103, 105, and 106 be allowed, that new claims 108-153 be allowed, and that the application be passed to issue. If a conference would expedite prosecution of the instant application, the Examiner is hereby invited to telephone the undersigned to arrange such a conference.

Respectfully submitted,



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